Timing Influenced General-Cell Genetic Floorplanner

Sait, S.M. Youssef, H. Tanvir, S. Benten, M.S.T.;Dept. of Comput. Eng., King Fahd Univ. of Pet.Miner., Dhahran;

Design Automation Conference, 1995. Proceedings of the ASP-DAC '95/CHDL '95/VLSI '95., IFIP International conference Hardware Description Languages; IFIP International conference Very Large Scale Integration., Asian and South Pacific;Publication Date: 29 Aug-1 Sep 1995;ISBN: 4-930813-67-0

King Fahd University of Petroleum & Minerals

http://www.kfupm.edu.sa

Summary

In this paper we present a timing-influenced floorplanner for general cell IC design. The floorplanner works in two phases. In the first phase we restrict the modules to be rigid and the floorplan to be slicing. The second phase of floorplanner allows modification to the aspect ratios of individual modules to further reduce the area of the overall bounding box. The first phase is implemented using genetic algorithm while in the second phase we adopt a constraint graph based approach. Experimental results are also presented